

DISCUSSION

It is of interest that within the Mygalomorphae both *Missulena* (a member of the Ctenizidae, sub-family Actinopodinae), and representatives of the family Barychelidae have, apparently convergently, developed a double-doored burrow entrance. Feio (1952) gives a description and photographs of the entrance doors of *Paraceniopelma gericormophila*, an arboreal Barychelid from Brazil. Some other Barychelid genera are reported to have 2 doors to the burrow. Also the author has collected terrestrial Barychelids with 2 doors from Western Australian localities. The Barychelid doors have the hinges parallel and in juxtaposition to one another, thus they open in exactly opposite directions, whereas the *Missulena* burrows have the doors facing in roughly the same direction and if the hinge lines of the doors are projected horizontally they intersect at an angle of about 120° (see Figures 1 and 2).

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SENTINEL DUTIES AMONG COCKATOOS

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In her book "Studies in the Life History of the Song Sparrow" on pp. 88-9, Margaret Morse Nice mentions the posting of sentinels by social birds and mammals. She then adds that it is hard to imagine by what technique a flock could post sentinels.

The following notes may shed some light on the matter.

My father used to tell of flocks of White Cockatoos feeding on planted grain in the paddocks of his boyhood home near Shepparton in Victoria. He said that the sentinel would change duties by flying down to a feeding bird and pecking it. The latter

bird would then fly up to the lookout post to take its turn at watching. An observer needed much care and patience to draw close enough to see this as the flock would fly away at the first signal from the suspicious sentinel.

My own observations of the White-Tailed Black Cockatoo *Calyptorhynchus baudinii* in the Cranbrook district confirms this. During some months of the year large flocks of these birds may be seen in heavy screeching flight. After they settle down in a tree the screeching gradually subsides to a murmur. On only one occasion have I succeeded in drawing close enough to a resting flock to make detailed observations. A warning screech from one bird always drove them from the isolated tree in which they chose to rest.

However, on June 22, 1929 (a long time ago but the incident made such an impression that I made note of it) a large flock settled in a dead tree about a quarter of a mile from where I stood. Their loud screeching calls of "wee-loo" settled down into the familiar continuous murmuring that had so often tantalised me. Careful stalking behind occasional trees brought me to the edge of a wide stretch of low scrub in the middle of which was the big dead tree on which the cockatoos were perched.

There were about 50 pairs in the boughs jostling for position, and at the very top was a single bird, the sentinel, keeping watch. It seemed somewhat distracted by the behaviour of its companions and this no doubt aided my successful approach.

All the other birds were courting. Most of them were already paired. These snuggled contentedly together, in couples, one of each pair resting its head on its mate's shoulder; they "kissed"; they stroked each other's head and wings. One coy bird was soon noticeable. It rejected advances from a few birds, which then moved on to woo others. Before long only this coy bird and one remaining wooer seemed unsettled. It sidled away and seemed to repel advances as much as it invited them.

All the while there was a continuous chorus of murmuring cocky talk. The birds are somewhat grotesque, black, white-checked and angular. Their billing and cooing in almost human fashion made a startling sight.

For some time the sentinel had been scanning its companions as much as the horizon. It grew increasingly restive until at last it could stand it no longer. It flew down to a contented couple, gave one of the birds a peck and then turned to the coy bird to begin wooing, while his nominee took over the sentinel duties at the top of the tree. The rough handling that the coy bird now received soon brought it to a submissive state of mind and as it finally laid its head on the former sentinel's shoulder I could contain myself no longer. My laughter was like a thunderbolt. The flock rose in a startled, screeching, black and white cloud. Thus ended my only observation of sentinel duties in a flock.